What we claim is:

1. A method for printing a three-dimensional object, the method comprising:
depositing a first portion of a layer of interface material, by a three-dimensional printing apparatus; and
depositing an additional portion of said layer of interface material, said additional portion separated by said first portion by a space, wherein said first portion, said additonal portion, and said space are disposed within the same plane.
2. The method of claim 1, comprising forming one or more non-continuous segments within said layer of interface material.
3. The method of claim 1, comprising filling said space.
4. The method of claim 1, comprising depositing said portions in selected areas.
5. The method of claim 1, comprising depositing an additional layer in an additional plane, said additional layer including an additional space, said space and said additional space being displaced when viewed perpendicular to said additional plane.
6. The method of claim 1, wherein said interface material is selected from the group consisting of modeling material, support material and any combination thereof.
7. A method for printing a three-dimensional object, the method comprising:
depositing a support construction; and
depositing a rigid exterior around said support construction; and
depositing a release construction layer around said rigid exterior, said release construction layer being between said rigid exterior and the object.
8. The method of claim 7, wherein said rigid exterior has a substantially similar strength and elasticity to the object.
9. The method of claim 7, the method comprising constructing a grid from modeling material, said grid being disposed within said support construction.
10. The method of claim 7, comprising removing said support construction as a single unit.

11. The method of claim 7, comprising leaving a space for said release construction layer between the object and said rigid construction.

12. The method of claim 7, wherein said release construction layers remain in a non-polymerized state when exposed to radiation.

13. The method of claim 7, wherein said release construction layers, said support construction layers or said model construction layers partially solidify upon irradiation.

14. The method of claim 7, wherein said model construction layers solidify upon irradiation.

15. The method of claim 7, wherein said release layer is non-planar.

16. The method of claim 7, comprising depositing said release construction layers at selected locations.

17. The method of claim 7, comprising constructing a plurality of direction indicators, said indicators indicating an order of priority in removal of said support construction.

18. The method of claim 7, comprising constructing said support construction with a tapered shape in the direction of preferred removal.

19. The method of claim 7, comprising depositing support construction indicators on said support construction.

20. The method of claim 7, wherein said support construction is selected from the group consisting of modeling material, support material and any combination thereof.

21. The method of claim 7, wherein said release construction layer is constructed from materials selected from the group consisting of modeling material, support material and any combination thereof.

22. A method of constructing a three dimensional object, the method comprising:
depositing interface material to form a support construction; and
constructing for said interface material indicators indicating a preferable removal instruction for at least portions of said support construction.

23. The method of claim 22, comprising displaying said direction indicator on an output device.

24. The method of claim 22 wherein said indicators include indications of an order of disassembly.

25. The method of claim 22, wherein said indicators include visible printing.

26. An object printing method, comprising dispensing a plurality of layers of interface material in a predetermined arrangement to form a casting mold, such that the outer shell of such mold includes predominantly modeling material, and the interior of said printed mold includes predominantly support material.

27. The method of claim 26, comprising constructing a grid of modeling material within said support material.

28. The method of claim 26, comprising curing said mold.

29. The method of claim 26, further comprising a process of casting said mold, wherein said process comprises enclosing said object in a casting slurry and forming a mold for casting by burning out said object.

30. The method of claim 26 wherein said interface material includes one or more of modeling material, support material and any combination thereof.

31. An apparatus for printing a three-dimensional object, comprising:

a controller to enable depositing a first portion of a layer of interface material, and depositing an additional portion of said layer of interface material, said additional portion separated by said first portion by a space, wherein said first portion, said additional portion, and said space are disposed within the same plane.

32. The apparatus of claim 31, wherein said controller is to enable formation of one or more non-continuous segments within said layer.

33. The apparatus of claim 31 wherein said controller is to enable filling said space.

34. The apparatus of claim 31 wherein said controller is to enable depositing an additional layer in an additional plane, said additional layer including an additional space, said space and said additional space being displaced when viewed perpendicular to said additional plane.

35. The apparatus of claim 31 wherein said controller is to enable depositing additional displaced layers.

36. An apparatus for printing a three-dimensional object, comprising:

a controller to enable constructing a support construction, constructing a rigid exterior around said support construction, and constructing a release layer around said rigid exterior, said release layer being between said rigid exterior and the object.

37. The apparatus of claim 36, wherein said rigid exterior has a substantially similar strength and elasticity to the object.

38. The apparatus of claim 36, wherein said controller is to enable constructing a grid from modeling material, said grid disposed within said support construction.

39. The apparatus of claim 36, wherein said controller is to enable removal of said support construction as a whole.

40. The system of claim 36, wherein said controller is to enable leaving a space for said release layer between the object and said support construction.

41. The apparatus of claim 36, wherein said one or more release layers remain in a non-polymerized state when exposed to radiation.

42. The apparatus of claim 36, wherein said one or more release layers partially solidify upon irradiation.

43. The apparatus of claim 36, wherein said one or more release layer is non-planar.

44. The apparatus of claim 36, wherein said one or more release layers are deposited at selected locations.

45. The apparatus of claim 36, wherein said controller is to enable constructing a plurality of direction indicators, said indicators indicating an order of priority in removal of at least portions of said release layer.

46. The apparatus of claim 36, wherein said controller is to enable constructing said support construction with a tapered shape in the direction of preferred removal.

47. The apparatus of claim 36, wherein said controller is to enable depositing support construction indicators on said support construction.

48. The apparatus of claim 36, wherein said support construction is selected from the group consisting of modeling material, support material and any combination thereof.

49. An apparatus for printing a three-dimensional object, comprising:

a controller to enable constructing an interface layer, and constructing for said interface layer indicators indicating instructions for at least portions of said interface materials.

50. The apparatus of claim 49, wherein said indicators are to be displayed on an output device.

51. The apparatus of claim 49, wherein said indicators include indications of an order of disassembly.

52. The apparatus of claim 49, wherein said indicators include visible printing.

53. An apparatus for printing a three-dimensional object, comprising:

a controller to enable dispensing a plurality of layers of interface material in a predetermined arrangement to form a casting mold, such that the outer shell of such mold includes predominantly modeling material, and the interior of said printed mold includes predominantly support material.

54. The apparatus of claim 53, wherein said controller is to enable constructing a grid of modeling material within said support material.

55. The apparatus of claim 53, wherein said controller is to enable curing said mold.

56. The apparatus of claim 53, wherein said controller is to further enable casting said mold.

57. The apparatus of claim 53, wherein said interface material includes one or more of modeling material, support material and any combination thereof.

58. A pseudo composite material, said pseudo composite material comprising a first phase and a second phase, wherein each phase comprises an organic compound, wherein each phase comprises a multiplicity of construction layers, wherein said layers were deposited by ink-jet printing, wherein said pseudo composite material exhibits non-homogeneous three-dimensional structure.

59. The pseudo composite material according to claim 58, wherein said first phase is structurally different from said second phase.

60. The pseudo composite material according to claim 58, wherein said first phase is chemically different from said second phase.

61. The pseudo composite material according to claim 58, wherein said first phase exhibits different properties from said second phase.

62. The pseudo composite material according to claim 58, wherein said first phase is produced by dispensing a first phase composition and said second phase is produced by dispensing a second phase composition.

63. The pseudo composite material according to claim 62, wherein said first phase composition, said second phase composition or both comprise a curable component.

64. The pseudo composite material according to claim 63, wherein said curable component is electron beam curable, electromagnetic radiation curable, thermo-curable or any combination thereof.

65. The pseudo composite material according to claim 62, wherein said first phase composition, said second phase composition or both comprise a first interface material, wherein said first phase composition and said second phase composition are not identical.

66. The pseudo composite material according to claim 62, wherein said first phase composition, said second phase composition or both comprise a first interface material and a second interface material in a pre-determined proportions, wherein said first phase composition and said second phase composition are not identical.

67. The pseudo composite material according to claim 58, wherein at least one phase is a continuous phase.

68. The pseudo composite material according to claim 58, wherein at least one phase is a non-continuous phase.

69. The pseudo composite material according to claim 58, wherein the properties of said material are isotropic properties, un-isotropic properties or a combination thereof.

70. The pseudo composite material according to claim 69, wherein said properties are mechanical, thermo-mechanical, optical, acoustic, electrical properties or any combination thereof.

71. The pseudo composite material according to claim 69, wherein the mechanical strength of said pseudo composite material along one axis of said material is higher than said mechanical strength of said material along another axis of said material.

72. The pseudo composite material according to claim 58, wherein the elasticity of said pseudo composite material along one axis of said material is higher than said elasticity of said material along another axis of said material.

73. The pseudo composite material according to claim 58, wherein the refractive index of said pseudo composite material along one axis of said material is different than said refractive index of said material along another axis of said material.

74. The pseudo composite material according to claim 58, wherein the refractive index of said material along one axis varies.

75. The pseudo composite material according to claim 58, further comprising one or more phases, wherein each phase comprising a multiplicity of construction layers.

76. A three-dimensional object comprising the pseudo composite material according to claim 58.

77. The three-dimensional object, according to claim 76, further comprising one or more phases, wherein each phase comprising a multiplicity of construction layers.

78. The three-dimensional object, according to claim 76, further comprising a multiplicity of support layers for supporting the construction layers of said three-dimensional object.

79. The three-dimensional object, according to claim 78, further comprising a multiplicity of release layers for releasing said support layers, wherein said release layers are positioned between said support layers and said construction layers.

80. A method for the preparation of a pseudo composite material having a non-homogeneous three-dimensional structure, said method comprising the steps of:

dispensing a first phase composition from a first dispenser to produce a first phase, wherein said first phase comprising an organic compound;

dispensing a second phase composition from a second dispenser to produce a second phase, wherein said second phase comprising an organic compound,

whereby depositing a multiplicity of construction layers; and

curing or solidifying said first phase composition and said second phase composition, thereby producing a pseudo composite material having a non-homogeneous three-dimensional structure.

81. The method according to claim 80, further comprising the step of producing one or more phases, wherein each phase comprising a multiplicity of construction layers.

82. The method according to claim 80, wherein at least one construction layer comprising said first phase composition and said second phase composition.

83. The method according to claim 80, wherein said curing or solidifying are performed immediately after deposition of one construction layer.

84. The method according to claim 80, wherein said curing or solidifying are performed after deposition of more than of one construction layers.

85. The method according to claim 80, wherein said curing or solidifying are performed during deposition of said construction layers.

86. The method according to claim 80, wherein said curing or solidifying is performed at a controlled temperature.

87. The method according to claim 86, wherein said temperature is higher than 25°C.

88. The method according to claim 80, wherein said first phase is structurally different from said second phase.

89. The method according to claim 80, wherein said first phase is chemically different from said second phase.

90. The method according to claim 80, wherein said first phase exhibits different properties from said second phase.

91. The method according to claim 80, wherein said first phase composition and said second phase composition comprising a curable component.

92. The method according to claim 91, wherein said curable component is electron beam curable, electromagnetic radiation curable, thermo-curable or any combination thereof.

93. The method according to claim 80, wherein said first phase composition, said second phase composition or both comprise a first interface material, wherein said first phase composition and said second phase composition are not identical.

94. The method according to claim 80, wherein said first phase composition, said second phase composition or both comprise a first interface material and a second interface material in a pre-determined proportions, wherein said first phase composition and said second phase composition are not identical.

95. The method according to claim 80, wherein at least one phase is a continuous phase.

96. The method according to claim 80, wherein at least one phase is a non-continuous phase.

97. The method according to claim 80, wherein the properties of said pseudo composite material are isotropic, un-isotropic properties or a combination thereof.

98. The method according to claim 97, wherein said properties are mechanical, thermo-mechanical, optical, acoustic, electrical or any combination thereof.

99. The method according to claim 80, wherein the mechanical strength of said pseudo composite material along one axis of said material is higher than said mechanical strength of said material along another axis of said material.

100. The method according to claim 80, wherein the elasticity of said pseudo composite material along one axis of said material is higher than said elasticity of said material along another axis of said material.

101. The method according to claim 80, further comprising the step of producing one or more phases, wherein each phase comprising a multiplicity of construction layers.

102. The method according to claim 80, for use in the preparation of a three-dimensional object.

103. The method according to claim 102, further comprising the step of producing one or more phases, wherein each phase comprising a multiplicity of construction layers.

104. The method according to claim 102, further comprising the step of producing a multiplicity of support layers for supporting said construction layers of said three-dimensional object.

105. The method according to claim 104, further comprising the step of producing a multiplicity of release layers for releasing said support layers, wherein said release layers are positioned between said support layers and said construction layers.

106. A three dimensional printer capable of printing a pseudo composite material, said printer comprising: a controller to enable producing a first phase and a second phase, wherein said first phase and said second phase comprise an organic compound, thereby producing a pseudo composite material having a non-homogeneous three-dimensional structure.

107. The printer according to claim 106, wherein said first phase is structurally different from said second phase.

108. The printer according to claim 106, wherein said first phase is chemically different from said second phase.

109. The printer according to claim 106, wherein said first phase exhibits different properties from said second phase.

110. The printer according to claim 106, wherein said first phase is produced by dispensing a first phase composition and said second phase is produced by dispensing a second phase composition.

111. The printer according to claim 110, wherein said first phase composition, said second phase composition or both comprise a curable component.

112. The printer according to claim 111, wherein said curable component is electron beam curable, electromagnetic radiation curable, thermo-curable or any combination thereof.

113. The printer according to claim 110, wherein said first phase composition, said second phase composition or both comprise a first interface material, wherein said first phase composition and said second phase composition are not identical.

114. The printer according to claim 110, wherein said first phase composition, said second phase composition or both comprise a first interface material and a

second interface material in a pre-determined proportions, wherein said first phase composition and said second phase composition are not identical.

115. The printer according to claim 106, wherein at least one phase is a continuous phase.

116. The printer according to claim 106, wherein at least one phase is a non-continuous phase.

117. The printer according to claim 106, wherein the properties of said material are isotropic properties, un-isotropic properties or a combination thereof.

118. The printer according to claim 117, wherein said properties are mechanical, thermo-mechanical, optical, acoustic, electrical properties or any combination thereof.

119. The printer according to claim 106, wherein the mechanical strength of said pseudo composite material along one axis of said material is higher than said mechanical strength of said material along another axis of said material.

120. The printer according to claim 106, wherein the elasticity of said pseudo composite material along one axis of said material is higher than said elasticity of said material along another axis of said material.

121. The printer according to claim 106, wherein the refractive index of said pseudo composite material along one axis of said material is different than said refractive index of said material along another axis of said material.

122. The printer according to claim 106, wherein the refractive index of said material along one axis varies.

123. The printer according to claim 106, further comprising one or more phases, wherein each phase comprising a multiplicity of construction layers.

124. The printer according to claim 106, wherein different phase combinations may be used.